FOR MORE INFORMATION
te.com/products/motorman

For email, phone or live chat, go to: **te.com/help**

Part numbers in this brochure are RoHS Compliant*, unless marked otherwise.
*as defined te.com/leadfree

Product Information Centers

Austria:	+43 1 90560 1228
Baltic Regions:	+46 8 50 72 50 20
Benelux:	+31 73 6246 999
Canada:	+1 905 475 6222
China:	+86 400 820 6015
France:	+33 1 34 20 86 86
Germany:	+49 6251-133 1999
Italy:	+39 011-4012632
Latin & South America:	+54 11 4733 2200
Mexico:	+52 55 1106 0800
Nordic:	+358 9 5123 4218
Spain & Portugal:	+34 93-2910366
Switzerland:	+41 71 447 04 47
United Kingdom:	+44 800 267666
United States:	+1 800 522 6752

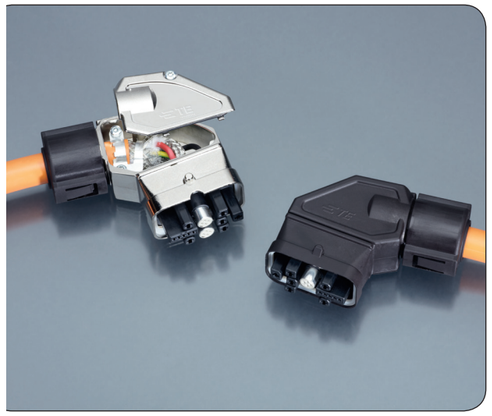
te.com

2-1773457-1 CIS WR 03/2012

Introducing
Motorman Hybrid Connector

Decentral servo motors are widely used in many industries and are typically connected via a deterministic system and power-fed by a separate cable. The Motorman hybrid connector from TE integrates communication, signal and power transmission of locally controlled motors within a single compact rectangular connector. In addition, two fast Ethernet sockets enable motors to be networked, providing the benefit of real-time automation.

The innovative design and compact size of the Motorman hybrid connector allows for significant space savings in comparison with traditional rectangular industrial connectors. It also helps to keep costs to a minimum by reducing the amount of overall cabling needed as well as shortening cable length.



APPLICATIONS

- I/O connector on decentral servo motors
- I/O connector on AC servo motors with PCB
- Drives (amplifiers)
- Packaging, assembly, woodworking or food processing machines
- Distributed inverters

STANDARDS AND SPECIFICATIONS

- Cat 5e (ISO/IEC11801)
- VDE
- CSA-C22.2
- UL 508C (cable side)
- UL 1977 (motor side)
  Category P V V A 2

FEATURE	APPLIED BENEFIT
Compact size of a traditional rectangular connector and hybrid construction (power, communication, signal)	Space savings and less influence on the customer's complex machine architecture
Several pre-customized models available for different customer environments	System integrity and price control for OEMs on the harness
Enclosures: • Robust metal • Plastic	• Fits tough industrial environments • Best economical offer for less critical purposes
Easy-to-open enclosure	Easy and safe configuration due to spacious side access to its interior
Offers space for two 4-pin Ethernet sockets, five power sockets, five signal sockets and one protection earth contact	All signals are bundled in one interface which means only one cable for the customer
Cat 5e communication in heavy environment	Supports industry standards and fast processes
Usage of TE Connectivity's MCON interconnection system and its stamped contacts	Advanced technology combined with lowest applied cost as processing can be done on application tooling that guarantees high reproducibility

PERFORMANCE DATA

- Environmental
  - IP65 (water & dust protection)
  - 25g (physical shock)
  - Electro-magnetic compatibility (EMC protection) in metal enclosure
- Electrical
  - 2 x 20A / 600V @ 85°C (20A/600V/6kV2)
  - 2 x 20A / 40V @ 85°C
  - 1 x Ground (protection earth)
  - 1 x Braid
  - 5 x 2A / 40V
- Communication
  - 2 x Cat 5e (AWG 22)
- Application
  - Reflow capable

TE Connectivity Motorman hybrid connector

INNOVATION ACHIEVEMENTS

Rectangular Size

The Motorman hybrid connector has a rectangular housing and boasts a very compact size, measuring just 41.5 x 22.3 millimeters. The housing and contact insert are fully downward compatible with TE Connectivity's Q series industrial heavy duty connectors.
The insert area offers a snug fit for power supply, signal, communication and Ethernet wires. Standard connectors containing these contacts would typically occupy twice as much space as Motorman.
Motorman's dense design was realized using TE Connectivity's highly modern MCON system of receptacle contacts.

Easy Assembly

The connector housing was developed specifically for the space-saving Motorman connector. Its design and assembly strategy follow the requirements of hybrid circular conductors. As cables of this type are fairly inflexible and rigid due to wire bundling, shielding and multiple insulations inside, the Motorman housing aligns with the natural bending geometry of the assembled cable . In contrast to traditional rectangular connectors, the cable does not enter the housing at a right angle but at 100°. This design avoids excessive bending angles at the beginning of the stripped wire section and ensures that the contacts are positioned straight in their cavity. The side access to the housing interior makes the Motorman connector particularly easy to install, even in places which are otherwise difficult to reach.

Cable Seal

The cable jacket seal generates two ring shaped lines of compression around the hybrid cable jacket. As the cable is held straight between the two sealing elements, the level of compression is very equally distributed around the jacket circumference. The optimized design permits it to assemble cables of between 13 and 17 millimeters diameter with one size of seal. As the seal is held in place by a latching protective cap, the assembly can take place without a torque-controlled tool.

PRODUCT OFFERING

Part number	Description
2120320-1	Receptacle Housing (metal)
1-2120319-1	Receptacle Housing (plastic)
2120321-1	Signal Housing (receptacle) for MCON 1.2
1719840-3	Receptacle Contact MCON 2.8; (2,5mm²)
1718475-3	Receptacle Contact MCON 2.8; (4mm²) MCON 2.8 Receptacle Contact
1452653-2	Receptacle Contact MCON 1.2; (0,35mm²)
1452656-2	Receptacle Contact MCON 1.2; (0,75mm²) MCON 1.2 Receptacle Contact
1103427-2	Communication Socket (HC26.Bu.4.C.5,2)
1658686-1	HDP-22 Socket Contact for communication insert
2120325-1	Tab Connector (with 2 commuincation units assembled)
2120330-1	Kit: Hood, Cover, Screen Clamp (metal)
2120339-1	Side Clip (metal)
2120340-1	Kit: Hood, Cover, Screen Clamp (plastic)
1245276-2	Side Clip (plastic)
1108847-1	Protection Cover
2120336-1	Protection Cover Sealing
2120337-1	Cable Seal

te.com/products/motorman